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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,937	12/12/2001	Yongcai Wang	83824HEC	1660

7590

05/14/2004

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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/017,937

Applicant(s)

WANG ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8-11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-6, 8-11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Claims 1, 4, 6, 8, 9, 11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (EP 903,246) for reasons of record (as set forth in the prior rejection under 35 USC 102) and for reasons given below.

Applicants have added coating thicknesses for both coatings to claim 1, functional language concerning the outermost layer, particle sizes for the inorganic particles and the stabilizer particles, and a coating amount in  $\text{g/m}^2$  for the stabilizer particles. Due to the materials of the ink receiving layer(s) of the primary reference, it will inherently meet the functional limitations of holding ink near the outer surface and serving as a sump for the ink solvent.

The reference discloses coating weights but not thicknesses for its coating layers. However, one of ordinary skill in the art would have determined the coating weight and/or thicknesses to yield intended results so that the layers are thick enough to sufficiently absorb the ink, but not have excess thickness that negatively impacts the paper handling properties without improving the appearance of images formed thereon. The coating weights of the reference are disclosed at page 7, line 56 to page 8, line 4 and includes additional reasons why the coating weight must be controlled. The reference recites a coating weight range for the lower layer that may be slightly greater, and therefore is likely to be slightly thicker than the outer coating. This is consistent with applicants' claim 1. In addition, the coating thickness ranges recited by applicants are fairly conventional. It is also noted from applicants' examples that the coating weights in  $\text{g/m}^2$  approximate the coating thickness in microns. Based upon the coating weight disclosure of the reference, it would have been obvious to one of ordinary skill in

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the art to determine coating thicknesses within conventional thickness ranges and to form the outer layer so that it is less thick than the inner layer.

Particle size for the antioxidant is disclosed at col. 6, lines 37-44 and for the inorganic particles at page 3, lines 55 to page 4, line 13. The amount of antioxidant is disclosed in terms of the amount of ultraviolet ray absorber or pigment (see page 5, line 53-56 and page 6, lines 37-44). On page 6, the reference also discloses the impact of including too much or too little antioxidant. Based upon these teachings, it would have been obvious to one of ordinary skill in the art to determine the amount of antioxidant that will serve its intended function in an economical manner.

Additionally, claim 16 now includes a phrase which states that the image-receiving layer and the base layer consist essentially of stabilizer particles for improved colorant fade. Applicants' specification states that UV absorbers may be used to prevent fade as well as antioxidants (page 17 of the specification), therefore, they cannot be said to materially affect the basic and novel characteristic(s) of the claimed invention. Consequently, the "consisting essentially of" language does not exclude the inclusion of UV absorbers.

2. Claims 1, 16 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (EP.903246) as applied to claim 1 above, and further in view of Chu et al. (6,440,537) for reasons of record and for reasons given above.

3. Claims 1, 16 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitamura et al. (EP 903246) as applied to claim 1 above, and further in view of Becker (US 2002/0071019) for reasons of record and for reasons given above.

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4. Applicant's arguments filed February 12, 2004 have been fully considered but they are not persuasive, primarily for the reasons set forth above. Applicants argue that the primary reference does not disclose use of stabilizer particles in the lower layer as well as in the upper ink-receiving layer and does not identify the unexpectedly improved results obtained from this arrangement. The examiner has studied the examples. With respect to Table 1, comparison appears to be made with an element with no stabilizer in the base layer. With respect to Tables 2 and 3, comparison appears to be made with an element with no stabilizer particles at all. The results obtained are not unexpected. Addition of stabilizer particles to any layer of the medium would be expected to decrease color density loss of the medium overall. The improvements of about 50% for these values cannot be considered unexpected. In addition, while applicants' remarks include an argument for limiting the amount of UV absorber in the medium, the examiner did not find such a teaching in applicants' specification. If this teaching was in the specification, applicants are invited to point it out.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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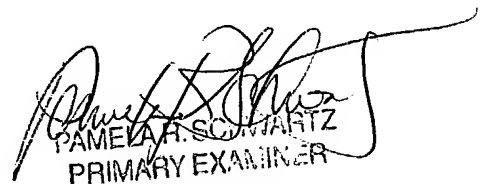
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz  
May 11, 2004

  
PAMELA A. SCHWARTZ  
PRIMARY EXAMINER